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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,986	01/22/2001	Andre Chovin	202103US2XPC	4069

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EXAMINER	
BASOM, BLAINE T	

ART UNIT	PAPER NUMBER
2173	6

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/764,986	CHOVIN ET AL.	
	Examiner	Art Unit	
	Blaine Basom	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 22 January 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. PCT/FR00/01308 .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular the phrase, "the memories in which the components are written," is deemed confusing, as there is no prior indication that the recited components are written into any type of memory. On the contrary, claim 1 expresses that the components themselves each have at least one memory, and consequently, it is unclear as to how such a component could be written into a memory, as is recited in claim 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,040,131, which is attributed to Torres, over U.S. Patent No. 6,243,858, which is attributed to Mizoguchi et al. (and hereafter referred to as "Mizoguchi"), and

also over U.S. Patent No. 5,625,823, which is attributed to Debenedictis et al. (and hereafter referred to as "Debenedictis"). In general, Torres discusses programs, such as spreadsheets, which allow users to apply various processing functions to data displayed by the program (see column 1, lines 20-31). Regarding the claimed invention, Torres discloses that a user may apply a function to designated data in a spreadsheet by placing an iconic representation of the function into a cell of the spreadsheet (see column 2, lines 14-36). The designated data is then processed according to the function, whereby the data resulting from such processing is displayed in the spreadsheet (for example, see column 4, line 18 – column 5, line 46). Moreover, Torres discloses that the iconic representation is selected from a "statistical attribute bar," which displays a library of icons representing functions applicable to the spreadsheet data (see column 2, lines 46-60). Torres thus discloses a man-machine interface comprising a spreadsheet associated with a library of graphical symbols, each symbol referring to an elementary function. However, Torres does not explicitly disclose that this library also comprises symbols corresponding to links, whereby as expressed in claim 1, the symbols may be selected from the library and assembled in such a way as to constitute a graph, each of the graphical symbols being represented in a group of adjacent elementary squares and their connections ending at the centers of the corresponding sides of each elementary square. It is understood that the spreadsheet of Torres may be implemented on a microcomputer on which must be implemented the functions corresponding to the spreadsheet, as is known in the art. Torres, however, does not explicitly disclose that the spreadsheet is connected to a compiler which is itself connected, via the operating system of the

microcomputer, to means of writing in at least one memory of the microcomputer, as is expressed in claim 1.

Like Torres, Mizoguchi discusses programs which allow users to apply various processing functions to data (see column 1, lines 9-40). Mizoguchi particularly discloses a grid, wherein like the spreadsheet of Torres, the user may place iconic representations of such processing functions into the cells of the grid (see column 1, lines 59-65). Regarding the claimed invention, the user may arrange a plurality of these iconic representations into a graph in order to create a more complex processing function (for example, see column 7, line 25 – column 8, line 26). Each of the icons in the graph are arranged in adjacent cells of the grid, with lines representing connections ending at the centers of the corresponding sides of each icon, as is shown in figure 9A for example. In addition, Mizoguchi discloses that, in addition to various processing functions, a "conditional branch processing" icon exists (see column 7, lines 39-49), whereby this conditional branch processing icon creates a link between two or more iconic representations, one of which is implemented based on a condition maintained by the condition branch icon (see column 10, line 56 – column 11, line 30).

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Torres and Mizoguchi before him at the time the invention was made, to modify the spreadsheet taught by Torres such that the icons can be arranged in a graph, which comprises conditional branches, as is taught by Mizoguchi. It would have been advantageous to one of ordinary skill to utilize such a combination because the user would then be able to create *programs* that process the spreadsheet data as he or she chooses, thus allowing for larger and more complex processes upon the spreadsheet data,

as is demonstrated by Mizoguchi. A computer implementing this spreadsheet of Torres and Mizoguchi is considered a system comprising a microcomputer on which must be implemented the command corresponding to a graph, this system comprising a man-machine interface comprising a spreadsheet associated with a library of two types of graphical symbols, each one corresponding with regard to the first type, to an elementary component function and, with regard to the second type, to a link, i.e. conditional branch, relating to the symbols of the first type, the symbols selected in the library being placed in the spreadsheet at a rate of one symbol per cell or per group of cells and assembled in such a way at to constitute a graph, each of the graphical symbols being represented in a group of adjacent elementary squares, and their connections ending at the centers of the corresponding sides of each elementary square. However, the combination of Torres and Mizoguchi does not explicitly teach that the microcomputer is connected to at least one component, on which the command corresponding to the graph is implemented, or that the microcomputer comprises a compiler, as is recited in claim 1.

Like the above-described combination of Torres and Mizoguchi, Debenedictis discusses spreadsheet applications, which allow users to create one or more programs (see column 1, line 63 – column 2, line 13). Debenedictis further discusses other products, which like that taught by Mizoguchi, enable users to create programs by constructing graphs comprised of visual objects (see column 1, lines 16-31). These programs created by the graphs described by Debenedictis are network applications, meaning that they are implemented remotely on computers located over a network (for example, see column 1, lines 16-38). Of particular relevance to the claimed invention, Debenedictis discloses that it would be beneficial to combine the features of such graph-

creating applications with the features of spreadsheet applications in order to create an overall application development environment (see column 2, lines 53-67). Debenedictis discloses that, in order to run applications created by such an application development environment, the applications are compiled into the instruction set of the computer on which the application is implemented (see column 4, lines 14-23). Like Debenedictis, the combination of Torres and Mizoguchi combines a graph-creating environment with that of a spreadsheet, as is shown above.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Torres, Mizoguchi, and Debenedictis before him at the time the invention was made, to modify the spreadsheet taught by Torres and Mizoguchi, such that the programs created by the spreadsheet may include network applications, like those of Debenedictis. It would have been advantageous to one of ordinary skill to utilize such a combination because network applications are commonly used in industry, as is demonstrated by Debenedictis[1]. The ability to create such network programs would thus be beneficial. A computer implementing this spreadsheet of Torres, Mizoguchi, and Debenedictis is considered a "universal graph compilation system," like that of the present application, this universal graph compilation system comprising a microcomputer connected to at least one component, such as a remote computer, on which must be implemented the command corresponding to a graph, this system comprising a man-machine interface implemented on the microcomputer where it is connected to a compiler which is itself connected via the operating system of the microcomputer to means of writing in at least one memory of the component, the man-machine interface comprising

[1]Debenedictis describes several programs used to create network applications (see column 1, lines 16-37). Because of this, it is understood that such network applications are extensively used in industry.

a spreadsheet associated with a library of two types of graphical symbols, each one corresponding with regard to the first type, to an elementary component function and, with regard to the second type, to a link relating to the symbols of the first type, the symbols selected in the library being placed in the spreadsheet at a rate of one symbol per cell or per group of cells and assembled in such a way at to constitute a graph, each of the graphical symbols being represented in a group of adjacent elementary squares, and their connections ending at the centers of the corresponding sides of each elementary square.

In reference to claims 2, 3, and 5, the spreadsheet of Torres, Mizoguchi, and Debenedictis, is used to create a graph corresponding to a command which is implemented by one or more remote computers, as is described above. It is understood that these remote computers are connected directly, via a network, to the microcomputer implementing the spreadsheet (for example, see column 3, lines 53-65 of Debenedictis). Consequently, the memories in which the commands are written are connected directly to the microcomputer and are fixed on the corresponding remote computers, and thus the commands are remote loaded.

With respect to claim 4, 6, and 7, Mizoguchi discloses that as iconic function representations are dragged onto a grid to create the graph, a check is done to determine if the icon is in an effective place (see column 7, line 66 – column 8, line 22). It is consequently understood that the above-described spreadsheet of Torres, Mizoguchi, and Debenedictis comprises a "topological checker," which determines if each icon is effectively located in the spreadsheet, as is done by Mizoguchi. Moreover, the spreadsheet of Torres, Mizoguchi, and Debenedictis, is associated with a compiler, as is described above. Such compilers inherently have a syntactic and semantic checker, as is

known in the art.[2] Consequently, it is understood that the above-described spreadsheet of Torres, Mizoguchi, and Debenedictis also comprises a syntactic and semantic checker.

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. The applicant is required under 37 C.F.R. §1.111(C) to consider these references fully when responding to this action. Egilsson presents a method for creating an application, the method comprising using a spreadsheet to specify the links between object modules of the application. The Yamada U.S. Patent cited therein presents a visual program generator, wherein icons representing functions and links between functions are each placed in the cells of a grid and arranged to create a graph. Lastly, the Seyler U.S. Patent cited therein presents a graph-based programming method, wherein this method utilizes a spreadsheet in order to enable users to create a graphical program.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (703) 305-7694. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (703) 308-3116. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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[2] For example, see Chapter 1.3 of the book entitled *Compilers, Principles, Techniques, and Tools*, which is written by Alfred Aho, Ravi Sethi, and Jeffrey Ullman.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-3900.

btb

JOHN CABECA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 21